

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US6  
Page 3

# IN THE CLAIMS:

1.-42. (Canceled)

43. (Currently Amended) A method of inspecting a specimen having an optically-transparent film thereon, comprising:

emitting light containing a plurality of wavelengths from a light source;  
illuminating the specimen with a selected wavelength or wavelengths of the  
light through a lens;

detecting through the lens with a sensor, an image of a pattern on the  
specimen as illuminated by the selected wavelength or wavelengths of the light, and  
outputting from the sensor, a signal concerning a detected image; and

processing the signal outputted from the sensor and obtaining information of  
defects of the pattern;

wherein, in the illuminating, selection of the selected wavelength or  
wavelengths of the light is made so as to substantially prevent optical interference of  
lights reflected from the specimen to form the image, where the optical interference  
is affected by a variation of thickness of the optically-transparent film formed on the  
specimen.

~~wherein light components having a predetermined wavelength range are  
selected from the light emitted from the light source for substantially preventing  
interference of lights reflected from the specimen by the illuminating, and are used to  
illuminate the specimen.~~

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 4

44. (Previously Presented) A method according to the Claim 43, wherein in the detecting, the image of the pattern is detected by a time delay integration sensor.

45. (Previously Presented) A method according to the Claim 43, wherein in the illuminating, the specimen is illuminated with ultra violet light selected from the light emitted from the light source.

46. (Currently Amended) A method according to the Claim 43, wherein in the illuminating, a wavelength selection filter selects the selected wavelength or wavelengths within light components having a predetermined wavelength range of 600 nm or under from the light emitted from the light source.

47. (Currently Amended) A method of inspecting a specimen having an optically-transparent film thereon, comprising:

illuminating the specimen through an objective lens with light, ~~with the light having a predetermined wavelength range as selected a selected wavelength or wavelengths~~ from light having a plural wavelengths emitted from a light source, wherein selection of the selected wavelength or wavelengths of the light is made so as to substantially prevent optical interference of lights reflected from the specimen, where the optical interference is affected by a variation of thickness of the optically-transparent film formed on the specimen; for substantially preventing interference of lights reflected from the specimen by the illuminating;

detecting with a time delay integration sensor, a light reflected from the specimen by the wavelength light and passed through the objective lens; and

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 5

processing the output signal from the time delay integration sensor and  
obtaining information relating to a defect of the specimen.

48. (Previously Presented) A method according to the Claim 47, wherein in  
the illuminating, the specimen is illuminated with ultra violet light selected from the  
light emitted from the light source.

49. (Previously Presented) A method according to the Claim 48, wherein the  
time delay integration sensor outputs signals in parallel, and the signals outputted in  
parallel are processed in parallel in the processing operation.

50. (Previously Presented) A method according to the Claim 47, wherein in  
the processing, the output signal from the time delay integration sensor is processed  
using a variable defect detection sensitivity which varies according to a position on  
the specimen.

51. (Previously Presented) A method according to the Claim 47, wherein in  
the processing, the output signal from the time delay integration sensor is processed  
using a variable defect detection sensitivity which varies according to the pattern  
being inspected.

52. (Currently Amended) An apparatus for inspecting a specimen having an  
optically-transparent film thereon, comprising:

a light source to emit light containing a plurality of wavelengths;

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 6

an illuminating unit to illuminate the specimen with a selected wavelength or wavelengths of light emitted from the light source, wherein selection of the selected wavelength or wavelengths of the light is made so as to substantially prevent optical interference of lights reflected from the specimen, where the optical interference is affected by a variation of thickness of the optically-transparent film formed on the specimen;

a detecting unit to detect an image of a pattern on the specimen as illuminated by the illuminating unit, and to output a signal concerning a detected image; and

a processing unit to process the signal outputted from the detecting unit and to obtain information of defects of the pattern.;

~~wherein, the illuminating unit selects predetermined light components having a predetermined wavelength range from the light emitted from the light source for substantially preventing interference of lights reflected from the specimen by the illuminating, to illuminate the specimen.~~

53. (Previously Presented) An apparatus according to the Claim 52, wherein the detecting unit detects the image of the pattern with a time delay integration sensor.

54. (Currently Amended) An apparatus according to the Claim 52, wherein the light source emits ultra violet light, and the illuminating unit selects the ultra violet light from the light emitted from the light source as the selected wavelength or

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 7

~~wavelengths of light, predetermined light components having a predetermined wavelength range.~~

55. (Previously Presented) An apparatus according to the Claim 52, wherein the light source is a lamp.

56. (Previously Presented) An apparatus according to the Claim 52, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to a position on the specimen.

57. (Previously Presented) An apparatus according to the Claim 52, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to the pattern being inspected.

58. (Currently Amended) An apparatus for inspecting a specimen having an optically-transparent film thereon, comprising:

a light source to emit light containing plural wavelengths;

an illuminating unit having an objective lens to illuminate the specimen through the objective lens with a selected wavelength or wavelengths of the wavelength-light, wherein selection of the selected wavelength or wavelengths of the light is made so as to substantially prevent optical interference of lights reflected from the specimen, where the optical interference is affected by a variation of

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 8

~~thickness of the optically-transparent film formed on the specimen; where the having a predetermined wavelength range as selected from the light emitted from the light source for substantially preventing interference of lights reflected from the specimen by the illuminating;~~

a detecting unit to detect an image of the specimen as illuminated by the illuminating unit through the objective lens, with a sensor; and

a processing unit to process an output signal from the sensor and to obtain information relating to a defect of the specimen.

59. (Previously Presented) An apparatus according to the Claim 58, wherein the light source emits ultra violet light, and the illuminating unit selects the ultra violet light from the light emitted from the light source, to illuminate the specimen.

60. (Currently Amended) An apparatus according to the Claim 58, wherein the illuminating unit includes a wavelength selection filter to select the selected wavelength or wavelengths within ~~light components having a predetermined~~ wavelength range of 600 nm or under from the light emitted from the light source, to illuminate the specimen.

61. (Previously Presented) An apparatus according to the Claim 58, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to a position on the specimen.

MAEDA et al., SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

501.33745CX4 / 219400807US5  
Page 9

62. (Previously Presented) An apparatus according to the Claim 58, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to the pattern being inspected.

63. (Currently Amended) A method according to Claim 47, wherein a wavelength selection filter for selecting the selected wavelength or wavelengths from the light is disposed between the light source and the objective lens.

64. (Currently Amended) A method according to Claim 47, wherein a wavelength selection filter for selecting the selected wavelength or wavelengths from the light is disposed between the light source and the objective lens.

65. (Currently Amended) An apparatus according to Claim 52, comprising a wavelength selection filter disposed between the light source and the objective lens, which selects the selected wavelength or wavelengths from the light. ~~predetermined light components.~~

66. (Currently Amended) An apparatus according to Claim 58, comprising a wavelength selection filter disposed between the light source and the objective lens, which selects the selected wavelength or wavelengths from the light.

67. (Currently Amended) An apparatus for inspecting a specimen having an optically-transparent film thereon, comprising:

MAEDA *et al.*, SN 10/686,584  
26 June 2006 Amendment  
Responsive to 24 March 2006 Office Action

601.33745CX4 / 219400807US5  
Page 10

a light source to emit light containing a plurality of wavelengths;

a non-interference light selector including a filter to select a predetermined wavelength or wavelengths from the light emitted from the light source, wherein selection of the predetermined wavelength or wavelengths of the light is made so as to substantially prevent optical interference of lights reflected from the specimen, where the optical interference is affected by a variation of thickness of the optically-transparent film formed on the specimen; for substantially preventing interference of lights reflected from the specimen, to illuminate the specimen;

an optical unit having plural lenses to form an optical path of the light emitted from the light source, including an objective lens to pass the light having predetermined wavelength or wavelengths from the non-interference light selector to the specimen;

a detecting unit to detect an image of a pattern on the specimen as illuminated by the predetermined wavelength or wavelengths and reflected back through the objective lens, and to output a signal concerning a detected image; and

a processing unit to process the signal outputted from the detecting unit and to obtain information of defects of the pattern;

wherein the optical unit illuminates the specimen through the objective lens.